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Post-analysis Storage Temperature

Factors and Their Possible Consequences:
With elevated temperatures, RBC rupture may occur.

With frozen whole blood samples, blood cells, including RBC, will rupture.

Corrective Actions

- Keep specimens at 20-25°C, unless otherwise specified.
- If a sample must be transported "on ice", ensure that an ice slurry (mixture of ice and water) is used to maintain the sample at a consistent temperature (2-8°C).
- If a sample is not stable at 20-25°C, keep it in the refrigerator (2-8°C) in a separate aliquot, unless otherwise specified.
- Ensure centrifugation temperatures are controlled and kept within the acceptance limits/ranges in accordance with manufacturers' recommendations.

References:

1. *Collection of Diagnostic Venous Blood Specimens.* 7th ed. CLSI Standard GP41. Wayne, PA: Clinical and Laboratory Standards Institute; 2017.
2. *Procedures for the Handling and Processing of Blood Specimens;* Approved Guideline, 4th ed. CLSI Document H18-A4. Wayne, PA: Clinical and Laboratory Standards Institute; 2010.
3. Storage of serum or whole blood samples? Effects of time and temperature on 22 serum analytes. Heins M, Heil W, Withold W. Eur J Clin Chem Clin Biochem 1995;33:231-238.